REMARKS

The Office Action dated April 8, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

By this Response, claims 1-23 have been amended to more particularly point out and distinctly claim the subject matter of the present invention. Claims 24-35 have been added. No new matter has been added. Support for the above amendments is provided in the Specification at in paragraphs [0018]-[0074]. Accordingly, claims 1-35 are currently pending of which claims 1, 12, and 23-24 are independent claims.

In view of the above amendments to the claims, and the following remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending claim rejections for the reasons discussed below.

Claim Rejections under 35 U.S.C. §102(e)

The Office Action rejected claims 1-7, 9-18, and 20-23 under 35 U.S.C. §102(e) as allegedly anticipated by Hakkinen (U.S. Patent No. 6,567,459) ("Hakkinen"). The Office alleged that Hakkinen discloses or suggests every claim feature recited in claims 1-7, 9-18, and 20-23. Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in Hakkinen.

Claim 1, upon which claims 2-11 depend, recites a method. The method includes transmitting a carrier carrying a first signal and a second signal. At least a portion of the first signal is subjected to a measurement for adjusting receive characteristics of a mobile station for a reception of at least a portion of the second signal. The method further includes and applying antenna hopping to the carrier such that the at least a portion of the first signal and the at least a portion of the second signal are transmitted during an interval between two consecutive antenna hops between at least two antenna elements.

Claim 12, upon which claims 13-22 depend, recites an apparatus. The apparatus includes a signal generator configured to generate a first signal and a second signal. The first signal is subjected to a measurement for adjusting receive characteristics of a mobile station for a reception of at least a portion of the second signal. The apparatus further includes an antenna hop generator configured to apply at least two antenna hops to a carrier carrying the first and second signals to the mobile station such that the at least a portion of the first signal and the at least a portion of the second signal are transmitted during an interval between two consecutive antenna hops between at least two antenna elements.

Claim 23 recites an apparatus. The apparatus includes transmitting means for transmitting a carrier carrying a first signal and a second signal. At least a portion of the first signal is subjected to a measurement for adjusting receive characteristics of a mobile station for a reception of at least a portion of the second signal. The apparatus further includes applying means for applying antenna hopping to the carrier such that the at least a portion of the first signal and the at least a portion of the second signal are transmitted during an interval between two consecutive antenna hops between at least two antenna elements.

As will be discussed below, Hakkinen fails to disclose or suggest every feature recited in claims 1-7, 9-18, and 20-23, and therefore fails to provide the advantages and features discussed above.

Hakkinen is directed to a power control method in a mobile communication system in which transmission of a signal of one logical connection over the radio path employs hopping, such as frequency hopping, antenna hopping, or timeslot hopping. Hakkinen further discloses that the method is characterized in that the quality of the signal received on the radio connection is determine on one hopping setting, such as frequency, antenna or timeslot, and the power control is carried out on the radio connection in question from hopping setting to hopping setting so that the transmission power of at least one hopping setting, such as frequency, differs from the transmission power of at least one other hopping setting, such as frequency, used on the same radio connection (Hakkinen, Abstract; col. 3, line 48, to col. 4, line 20).

Applicants respectfully submit that Hakkinen fails to disclose or suggest every feature recited in claim 1, and similarly recited in claims 12 and 23. Specifically, Hakkinen fails to disclose or suggest, at least, "transmitting a carrier carrying a first signal and a second signal, wherein at least a portion of the first signal is subjected to a measurement for adjusting receive characteristics of a mobile station for a reception of at least a portion of the second signal; and applying antenna hopping to the carrier such that the at least a portion of the first signal and the at least a portion of the second signal are transmitted during an interval between two consecutive antenna hops between at least two antenna elements" as recited in claim 1, and similarly recited in claims 12 and 23 (emphasis added).

The Office Action alleged that Hakkinen discloses the aforementioned claim features, citing column 2, line 39, to column 3, line 31, and column 6, lines 9-34. However, a review of these passages demonstrates that Hakkinen fails to disclose or suggest the aforementioned claim features.

Rather, Hakkinen discloses a conventional power control scheme in which power transmission is adjusted on the basis of measurements carried out by a receiving side of a system which utilizes time, frequency, or antenna hopping (Hakkinen, col. 6, lines 10-34). In column 6, lines 18-26, Hakkinen describes the quality of a signal transmitted via antenna 1 of a base station BTS is determined at a mobile station MS via a measurement (step 51). The mobile station MS transmits the measurement results to the base station BTS which determines the need for power adjustment of the next transmission from antenna 1 (step 52). Then at step 54, the transmission power of the signal *to be transmitted next* via antenna 1 is adjusted according to the determined power adjustment need.

Accordingly, Hakkinen discloses that the mobile station MS performs the measurement for one signal transmitted via an antenna, and the adjustment for the *next* signal to be transmitted from the same antenna.

Further, at column 3, line 66, to column 4, line 5, Hakkinen discloses that the power control is carried out based on a quality of a signal, set as a result of the previous, same hopping value, e.g. the signal previously transmitted on the same antenna, or on the basis of the quality of the signal transmitted with the previous hopping value. Further, at column 2, lines 47-49, Hakkinen describes that the hopping is carried out in periods of one burst.

Accordingly, Hakkinen clearly discloses that the measurement of the quality of the signal and the adjustment of the signal relate to different antenna hops. Hence, the signal being measured and the adjusted signal are transmitted in different antenna hops. With one hop having the duration of one burst, one of ordinary skill in the art would understand that it would be impossible to transmit a signal from the base station, measure it in the mobile station, transmit measurements results back to the base station, process the measurements results in the base station, and carry out the power adjustment *within the same hop*, e.g. while the signal is being transmitted.

Accordingly, Hakkinen fails to disclose or suggest, at least, "a measurement for adjusting receive characteristics of a mobile station" as recited in claim 1, and similarly recited in claims 12 and 23. Rather, at described above, Hakkinen merely discloses an adjustment of transmission power, which one of ordinary skill in the art would understand is not a reception characteristic.

Furthermore, Hakkinen fails to disclose or suggest, at least, "applying antenna hopping to the carrier such that the at least a portion of the first signal and the at least a portion of the second signal are transmitted during an interval between two consecutive antenna hops between at least two antenna elements" as recited in claim 1, and similarly recited in claims 12 and 23. Hence, certain embodiments of the present invention, as recited in claim 1, and similarly recited in claims 12 and 23, define that the first signal and the second signal are transmitted between two consecutive antenna hops, i.e. from the same antenna after the antenna is selected as a transmitting antenna by the antenna hopping pattern and before another antenna is selected as the transmitting antenna. Hence, the first signal and the second signal are transmitted from the same antenna within the same antenna hop. Hakkinen fails to disclose or suggest such features.

Furthermore, Applicants respectfully submit that certain embodiments of the present invention and the teachings of Hakkinen relate to different operations in mobile communications. Hakkinen focuses on power control, while certain embodiments of the present invention relate to addressing a discontinuity in antenna hopping which the base station transmission poses on channel characterization.

Accordingly, Hakkinen fails to disclose or suggest every feature recited in claim 1, and similarly recited in claims 12 and 23.

Claims 2-7 and 9-11 depend from claim 1. Claims 13-18 and 20-22 depend from claim 12. Accordingly, claims 2-7, 9-11, 13-18, and 20-22 should be allowable for at least their dependency upon an allowable base claim, and for the specific limitations recited therein.

Therefore, Applicants respectfully request withdrawal of the rejections of claims 1-7, 9-18, and 20-23 under 35 U.S.C. §102(e) and respectfully submit that claims 1, 12, and 23, and the claims that depend therefrom, are in condition for allowance.

Claim Rejections under 35 U.S.C. §103(a)

The Office Action rejected claims 8 and 19 under 35 U.S.C. §103(a) as being allegedly unpatentable over Hakkinen. Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in Hakkinen.

As previously noted above, Hakkinen fails to disclose or suggest every feature recited in claims 1 and 12. Specifically, Hakkinen fails to disclose or suggest, at least, "transmitting a carrier carrying a first signal and a second signal, wherein at least a portion of the first signal is subjected to a measurement for adjusting receive characteristics of a mobile station for a reception of at least a portion of the second signal; and applying antenna hopping to the carrier such that the at least a portion of the first signal and the at least a portion of the second signal are transmitted during an interval between two consecutive antenna hops between at least two antenna elements" as recited in claim 1, and similarly recited in claim 12.

Claims 8 and 19 depend from claims 1 and 12, respectively. Accordingly, claims 8 and 19 should be allowable for at least their dependency upon an allowable base claim, and for the specific limitations recited therein.

Therefore, Applicants respectfully request withdrawal of the rejections of claims 8 and 19 under 35 U.S.C. §103(a) and respectfully submit that claims 1 and 12, and the claims that depend therefrom, are in condition for allowance.

CONCLUSION

In conclusion, Applicants respectfully submit that Hakkinen fails to disclose or suggest every feature recited in claims 1-35. The distinctions previously noted are more than sufficient to render the claimed invention unanticipated and non-obvious. It is therefore respectfully requested that all of claims 1-35 be allowed, and this present application be passed to issuance.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Brad Y. Chin
Attorney for Applicants
Registration No. 52,738

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

BYC:dlh

Enclosures: Additional Claim Fee Transmittal
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